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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _09 July 2008_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-15 and 25-28_ is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-15, 25-28_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All   b)☐ Some * c)☐ None of:

　　　　1.☐ Certified copies of the priority documents have been received.

　　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   The amendment filed 07/09/08 have been entered and made of record.

2.   Applicant's argument with respective to claims 1-15, 25-28 have been considered

but are moot in view of the new ground (s) of rejection.

3.   Claims 1-15, 25-28 are pending.

Claim Objections

4.   Claims 16-24 are objected to because of the following informalities: replace

"(withdrawn)" by -----(Canceled) ------. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6.   Claim1, 7- 9, 10, 13, 28 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Tsao et al. (Patent No.: US 7,236,491 B2) in view of Katayama et al.

(Pub. No.: US 2003/0204653 A1)

Regarding to claim 1, Tsao '491 disclose receiving at a processing element a request to transmit a packet associated with a packet identifier (col. 3, lines 35-40, packet identifier = identification of flow) (col. 2, lines 16-20, receiving a packet, identifying a flow for the packet) ;

determining a number of transmit buffers (figure 4, queues 112 (1) … 112 (n)) to be associated with the packet (col. 3, lines 35-40, retrieves the identification of flows and determines the number n and identification of flow queues 112 (1) and 112 (n)).

However, Tsao '491 are silent t to disclosing arranging for the packet to be transmitted through a port without storing the packet identifier in a local transmit queue if the number of transmit buffers does not exceed a pre- determined threshold

Katayama '653 discloses arranging for the packet to be transmit through a port (figure 3, classified the packet in priority classes queues and transmit the packet through the transmission interface 121, 122, 123, 124);

without storing the packet identifier (priorities A and B) in a local transmit queue if the number of transmit buffers does not exceed a pre- determined threshold (Paragraph [0044] stores received priority C data into the buffer 1, without being storing the data priorities A and B in the buffer 1 when the amount of current use of the buffer 1 does not exceed a threshold value.

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Tsao '491 with the teaching of Katayama '653, since Katayama '653 recited the motivation in the paragraph [0015] which increase in

received having low priority adversely affects transfer quality of received data having

higher priority.

7.   Regarding to claim 7, Tsao '491 disclose the limitations of claim 1 above.

        However, Tsao '491are silent to disclosing request to transmit the packet is

received from a queue manager.

        Katayama '653 discloses request to transmit the packet is received from a queue

manager (figure 3, Amount of use of shared buffer detection circuit 160).

T   hus, it would have been obvious to one of ordinary skill in the art at the time of

the invention to modify the system of Tsao '491 with the teaching of Katayama '653,

since Katayama '653 recited the motivation in the paragraph [0015] which increase in

received having low priority adversely affects transfer quality of received data having

higher priority.

8.   Regarding to claim 8, Tsao '491 disclose the limitations of claim 1 above.

        However, Tsao '491 are silent to disclosing to use thread , in multi-thread,

reduced instruction set computer micro engine

Katayama '653 discloses to use thread in multi-thread (figure 3, priority class

determination circuit 111a, 112a, 113a, 114a), reduced instruction set computer micro

engine (paragraph [0053]).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the system of Tsao '491 with the teaching of Katayama '653, since

Katayama '653 recited the motivation in the paragraph [0015] which increase in

received having low priority adversely affects transfer quality of received data having

higher priority.

9.   Regarding to claim 9, Tsao '491 discloses microengine is associated with at least

one of processor 104 (figure 1, processor 104).

10.   Regarding to claim 10, Tsao '491 disclose receiving at a processing element a

request to transmit a packet associated with a packet identifier (col. 3, lines 35-40,

packet identifier = identification of flow) (col. 2, lines 16-20, receiving a packet,

identifying a flow for the packet) ;

determining a number of transmit buffers (figure 4, queues 112 (1) … 112 (n)) to be

associated with the packet (col. 3, lines 35-40, retrieves the identification of flows and

determines the number n and identification of flow queues 112 (1) and 112 (n)).

        However, Tsao '491 are silent t to disclosing arranging for the packet to be

transmitted through a port without storing the packet identifier in a local transmit queue

if the number of transmit buffers does not exceed a pre- determined threshold

        Katayama '653 discloses arranging for the packet to be transmit through a port

(figure 3, classified the packet in priority classes queues and transmit the packet

through the transmission interface 121, 122, 123, 124);

without storing the packet identifier (priorities A and B) in a local transmit queue if the

number of transmit buffers does not exceed a pre- determined threshold (Paragraph

[0044] stores received priority C data into the buffer 1, without being storing the data

priorities A and B in the buffer 1 when the amount of current use of the buffer 1 does not

exceed a threshold value.

Thus, it would have been obvious to one of ordinary skill in the art at the time of

the invention to modify the system of Tsao '491 with the teaching of Katayama '653,

since Katayama '653 recited the motivation in the paragraph [0015] which increase in

received having low priority adversely affects transfer quality of received data having

higher priority.

11.   Regarding to claim 13, Tsao '491 disclose receiving at a processing element a

request to transmit a packet associated with a packet identifier (col. 3, lines 35-40,

packet identifier = identification of flow) (col. 2, lines 16-20, receiving a packet,

identifying a flow for the packet) ;

determining a number of transmit buffers (figure 4, queues 112 (1) … 112 (n)) to be

associated with the packet (col. 3, lines 35-40, retrieves the identification of flows and

determines the number n and identification of flow queues 112 (1) and 112 (n)).

However, Tsao '491 are silent to disclosing for the packet to be transmitted

through a port without storing the packet identifier in a local transmit queue if the

number of transmit buffers does not exceed a pre- determined threshold

Katayama '653 discloses arranging for the packet to be transmit through a port

(figure 3, classified the packet in priority classes queues and transmit the packet

through the transmission interface 121, 122, 123, 124);

without storing the packet identifier (priorities A and B) in a local transmit queue if the number of transmit buffers does not exceed a pre- determined threshold (Paragraph [0044] stores received priority C data into the buffer 1, without being storing the data priorities A and B in the buffer 1 when the amount of current use of the buffer 1 does not exceed a threshold value.

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Tsao '491 with the teaching of Katayama '653, since Katayama '653 recited the motivation in the paragraph [0015] which increase in received having low priority adversely affects transfer quality of received data having higher priority.

12.   Regarding claim 28, Tsao '491 discloses the limitations of claim 1 above.

However, Tsao '491 are silent to disclosing storing the packet in the number of transmit buffers

Katayama '653 discloses storing the packet in the number of transmit buffers (figure 5, small buffers 150).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Tsao '491 with the teaching of Katayama '653, since Katayama '653 recited the motivation in the paragraph [0015] which increase in received having low priority adversely affects transfer quality of received data having higher priority.

13.   Claims 2, 4-6, 11, 12, 14, 15 are rejected under 35 U.S.C. 103(a) as being

unpatentable over the combined system (Tsao '491 – Katayama '653) in view of Shirai

et al. (US Patent No. 5,734,654 03/31/1998).

        Regarding to claim 2, the combined system (Tsao '491 – Katayama

'653)discloses the limitations of claim 1 above; however, the combined system (Tsao

'491 – Katayama '653) are silent to disclosing to store packet IP in local transmit queue

for that port if the number of transmit buffer exceeds the pre-determined threshold.

        Shirai et al. disclose to arrange packet identifier to be stored in local transmit

queue for that port if the number of transmit buffer exceeds the pre-determined

threshold (figure 18 shows if congestion is detected then packet is stored in common

buffer means local memory, congestion is detected based on available resources such

as port, transmitting buffer etc, buffer exceeds a predetermined references value, col. 2,

lines 27-32).

        It would have been obvious to one of ordinary skill in the art at the time of the

invention was made to add technique from Shirai to the combined system (Tsao '491 –

Katayama '653)in order to store packet ID in local transmit queue, thereby preventing

packets to being discarded (5,734,654, col. 3, lines 55-67).

14.   Regarding to claim 11, claim 11 is rejected the same reasons of claim 2 above.

15.   Regarding to claim 14, claim 14 is rejected the same reasons of claim 2 above.

16.   Regarding to claims 4 - 6, 12, 15, the combined system (Tsao '491 – Katayama

'653) disclose the limitations of claim 1 above; however, the combined system (Tsao

'491 – Katayama '653) are silent to disclosing arranging for the packet to be transmitted

through a port without storing the packet identifier in a local transmit queue if the

number of transmit buffers does not exceed a pre-determined threshold.

Shirai et al. disclose arranged for the packet to be transmitted through without

storing the packet identifier in a local transmit queue if the transmit buffers does not

exceed a pre-determined threshold (figure 18 shows that if congestion is detected then

packet is stored in common buffer means local memory, congestion is detected based

on available resources such as port, transmitting buffer etc., buffer exceeds a

predetermined references value, local queue is empty or not, column 2, lines 27-32.

I would have been obvious to one of ordinary skill in the art at the time of the

invention was made to add technique from Shirai to the combined system (Tsao '491 –

Katayama '653) to transmit packets without storing in local queue to speed up packets

processing.

17.   Regarding to claim 5, Tsao '491 discloses evaluation is based on a flow-control

condition of that port (col. 2, lines 10-20).

18.   Regarding to claim 6, claim 6 is rejected the same reasons of claim 4 above.

19.   Regarding to claim 12, claim 12 is rejected the same reasons of claim 4 above.

20.   Regarding to claim 15, claim 15 is rejected the same reasons of claim 4 above.

21.   Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over the

combined system (Tsao '491 – Katayama '653 – Shirai) in view of Karisoon (Pub. No. :

US 2002/0146014).

Regarding to claim 3, the combined system (Tsao '491 – Katayama '653 – Shirai)

discloses that covers substantially all limitation of parent as claim above; however, the

combined system (Tsao '491 – Katayama '653 – Shirai) does not teach to store packet

in external memory when local transmit queue for that port is full.

Karisoon teaches technique to store packet in external memory when local

transmit queue for that port is full (page 9, paragraph [0016].

It would have been obvious to one of ordinary skill in the art at the time of the

invention was made to add technique from Karisoon into the combined system (Tsao

'491 – Katayama '653 – Shirai) to prevent packets from discarded.

22.   Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Marshall et al. (Pub.No.: US 2004/0213235 A1) in view of Katayama (Pub. No.: US

2003/0204653 A1).

Regarding to the claim 25, Marshall et al. discloses a backplane (figure 2,

backplane 220); a first line card (figure 2, line cards 400a, 400b, 400c connected to the

backplane 220); and a second line card (figure 2, line cards 400a, 400b, 400c

connected to the backplane (220), the second line card including a processing element

(figure 4, classification engine 500) having: an input path (figure 4, input interface 420)

to receive a request to transmit a packet associated with a packet identifier ([0011],

information associated with a packet, e.g., a virtual local area network (VLAN) identifier

(ID) and/or destination port ID, is provided to an initial classification stage of a

classification engine which generates a criterion, e.g., a packet field, and a rule

associated with the packet); a local memory portion (figure 4, queuing logic 440)

Determining a number of transmit buffers ([0012], queue ID, The VLAN ID and

destination port ID information associated with the packet are applied to the VLAN and

port/channel tables, respectively, to generate a set of queue ID base pointers, packet

field values, packet field valid values, and rules) ([0013], Information contained in the

selected final state table entry is combined with the queue ID base pointers to generate

the identifier, i.e., a queue ID, associated with the classified packet) ([0040], The

classification engine 500 processes the packet including classifying the packet and

determining a queue ID of a calendar queue 442 associated with the classified packet.

The queue ID is transferred to the queuing logic 440 which selects a calendar queue

442 associated with the queue ID and places information associated with the packet

(e.g., a pointer to the packet in buffer 450) on the selected queue 442. When the

information associated with the packet reaches the head of the selected queue 442, the

queuing logic 440 transfers the packet from buffer 450 to the output interface 430 where

it is transferred out the destination port 217, associated with the destination port ID, onto

the network) (see figure 4); arranging for the packet to be transmitted through a port

(figure 4, output interface 430).

However, Marshall et al. are silent to disclosing arranging for the packet to be

transmitted through a port without storing the packet in a local transmit queue if the

number of transmit buffers does not exceed a pre-determined threshold.

Katayama '653 discloses arranging for the packet to be transmit through a port (figure 3,

classified the packet in priority classes queues and transmit the packet through the

transmission interface 121, 122, 123, 124);

without storing the packet identifier (priorities A and B) in a local transmit queue if the

number of transmit buffers does not exceed a pre- determined threshold (Paragraph

[0044] stores received priority C data into the buffer 1, without being storing the data

priorities A and B in the buffer 1 when the amount of current use of the buffer 1 does not

exceed a threshold value.

Thus, it would have been obvious to one of ordinary skill in the art at the time of

the invention to modify the system of Marshall '235 with the teaching of Katayama '653,

since Katayama '653 recited the motivation in the paragraph [0015] which increase in

received having low priority adversely affects transfer quality of received data having

higher priority.

23.   Claims 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over

the combined system (Marshall '235 – Katayama '653) in view of Shirai et al. (US

Patent No. 5,734,654 03/31/1998).

Regarding to claim 26, the combined system (Marshall '235 – Katayama '653)

discloses the limitations of claim 25 above; however, the combined system (Marshall -

Kota) are silent to disclosing wherein the processing portion is further adapted to store

the packet identifier in the local memory portion if the number of transmit buffers exceed

the pre-determined threshold.

Shirai et al. disclose wherein the processing portion is further adapted to store

the packet identifier in the local memory portion if the number of transmit buffers exceed

the pre-determined threshold (figure 18 shows if congestion is detected then packet is

stored in common buffer means local memory, congestion is detected based on

available resources such as port, transmitting buffer etc, buffer exceeds a

predetermined references value, col. 2, lines 27-32).

It would have been obvious to one of ordinary skill in the art at the time of the

invention was made to add technique from Shirai to the combined system (Marshall –

Katayama '653) in order to store packet ID in local transmit queue, thereby preventing

packets to being discarded (5,734,654, col. 3, lines 55-67).

24.   Regarding to claim 27, Marshall '235 disclose the limitations of claim 25 above.

However, Marshall '235 are silent to disclosing wherein the processing portion is

to arrange for the packet to be transmitted through the port without the packet identifier

in the local memory portion on if (i) the number of transmit buffer does not exceed the

pre-determined threshold

Katayama '653 discloses arranging for the packet to be transmit through a port

(figure 3, classified the packet in priority classes queues and transmit the packet

through the transmission interface 121, 122, 123, 124);

without storing the packet identifier (priorities A and B) in a local transmit queue if the

number of transmit buffers does not exceed a pre- determined threshold (Paragraph

[0044] stores received priority C data into the buffer 1, without being storing the data

priorities A and B in the buffer 1 when the amount of current use of the buffer 1 does not

exceed a threshold value.

Thus, it would have been obvious to one of ordinary skill in the art at the time of

the invention to modify the system of Marshall '235 with the teaching of Katayama '653,

since Katayama '653 recited the motivation in the paragraph [0015] which increase in

received having low priority adversely affects transfer quality of received data having

higher priority.

25.   Claim1, 7- 9, 10, 13, 28 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Minick et al. (Patent No.: US 7,248,593 B2) in view of Katayama et

al. (Pub. No.: US 2003/0204653 A1)

Regarding to claim 1, Minick '593 disclose receiving at a processing element a

request to transmit a packet associated with a packet identifier (col. 8, lines 55-65,

packet identifier = higher priority, low priority) (col. 7, lines 27-31, packet identifier =

characteristic associated with packet) identifier (col. 8, lines 55-65, packet identifier =

higher priority, low priority);

determining a number of transmit buffers (figure 4, queues 427, 429, 431, 423

associated with higher priority packets) to be associated with the packet (col. 7, lines

27-30, a determination of the specific transmit queue (queues 427, 429, 431, 433 for

highest priority packet) within a given queue (figure 4, queues 427, 429, 431, 433, 437,

439, 441, 443) (col. 7, lines 27-30, determination of the specific transmit queue (figure

4, queues 427, 429, 431, 423 associated with higher priority packets) associated with

the packet); arranging for the packet to be transmitted through a port (figure 2, output

device 217).

However, Minick '593 are silent t to disclosing arranging for the packet to be

transmitted through a port without storing the packet identifier in a local transmit queue

if the number of transmit buffers does not exceed a pre- determined threshold

Katayama '653 discloses arranging for the packet to be transmit through a port

(figure 3, classified the packet in priority classes queues and transmit the packet

through the transmission interface 121, 122, 123, 124);

without storing the packet identifier (priorities A and B) in a local transmit queue if the

number of transmit buffers does not exceed a pre- determined threshold (Paragraph

[0044] stores received priority C data into the buffer 1, without being storing the data

priorities A and B in the buffer 1 when the amount of current use of the buffer 1 does not

exceed a threshold value.

Thus, it would have been obvious to one of ordinary skill in the art at the time of

the invention to modify the system of Minick '593 with the teaching of Katayama '653,

since Katayama '653 recited the motivation in the paragraph [0015] which increase in

received having low priority adversely affects transfer quality of received data having

higher priority.

26.   Regarding to claim 7, Minick '593 disclose the limitations of claim 1 above.

However, Minick '593 are silent to disclosing request to transmit the packet is received

from a queue manager.

Katayama '653 discloses request to transmit the packet is received from a queue

manager (figure 3, Amount of use of shared buffer detection circuit 160).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the system of Minick '593 with the teaching of Katayama '653, since

Katayama '653 recited the motivation in the paragraph [0015] which increase in

received having low priority adversely affects transfer quality of received data having

higher priority.

27.   Regarding to claim 8, Minick '593 disclose the limitations of claim 1 above.

        However, Minick '593 are silent to disclosing to use thread , in multi-thread,

reduced instruction set computer micro engine

Katayama '653 discloses to use thread in multi-thread (figure 3, priority class

determination circuit 111a, 112a, 113a, 114a), reduced instruction set computer micro

engine (paragraph [0053]).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the system of Minick '593 with the teaching of Katayama '653, since

Katayama '653 recited the motivation in the paragraph [0015] which increase in

received having low priority adversely affects transfer quality of received data having

higher priority.

28.   Regarding to claim 9, Minick '593 discloses microengine is associated with at

least one of network (figure 1, client device 103, 105, 107).

29.   Regarding to claim 10, Minick '593 disclose receiving at a processing element a

request to transmit a packet associated with a packet identifier (col. 8, lines 55-65,

packet identifier = higher priority, low priority) (col. 7, lines 27-31, packet identifier =

characteristic associated with packet) identifier (col. 8, lines 55-65, packet identifier =

higher priority, low priority);

determining a number of transmit buffers (figure 4, queues 427, 429, 431, 423

associated with higher priority packets) to be associated with the packet (col. 7, lines

27-30, a determination of the specific transmit queue (queues 427, 429, 431, 433 for

highest priority packet) within a given queue (figure 4, queues 427, 429, 431, 433, 437,

439, 441, 443) (col. 7, lines 27-30, determination of the specific transmit queue (figure

4, queues 427, 429, 431, 423 associated with higher priority packets) associated with

the packet); arranging for the packet to be transmitted through a port (figure 2, output

device 217).

However, Minick '593 are silent t to disclosing arranging for the packet to be

transmitted through a port without storing the packet identifier in a local transmit queue

if the number of transmit buffers does not exceed a pre- determined threshold

Katayama '653 discloses arranging for the packet to be transmit through a port

(figure 3, classified the packet in priority classes queues and transmit the packet

through the transmission interface 121, 122, 123, 124);

without storing the packet identifier (priorities A and B) in a local transmit queue if the

number of transmit buffers does not exceed a pre- determined threshold (Paragraph

[0044] stores received priority C data into the buffer 1, without being storing the data

priorities A and B in the buffer 1 when the amount of current use of the buffer 1 does not

exceed a threshold value.

Thus, it would have been obvious to one of ordinary skill in the art at the time of

the invention to modify the system of Minick '593 with the teaching of Katayama '653,

since Katayama '653 recited the motivation in the paragraph [0015] which increase in

received having low priority adversely affects transfer quality of received data having

higher priority.

Regarding to claim 13, Minick '593 disclose receiving at a processing element a

request to transmit a packet associated with a packet identifier (col. 8, lines 55-65,

packet identifier = higher priority, low priority) (col. 7, lines 27-31, packet identifier =

characteristic associated with packet) identifier (col. 8, lines 55-65, packet identifier =

higher priority, low priority);

determining a number of transmit buffers (figure 4, queues 427, 429, 431, 423

associated with higher priority packets) to be associated with the packet (col. 7, lines

27-30, a determination of the specific transmit queue (queues 427, 429, 431, 433 for

highest priority packet) within a given queue (figure 4, queues 427, 429, 431, 433, 437,

439, 441, 443) (col. 7, lines 27-30, determination of the specific transmit queue (figure

4, queues 427, 429, 431, 423 associated with higher priority packets) associated with

the packet); arranging for the packet to be transmitted through a port (figure 2, output

device 217).

However, Minick '593 are silent t to disclosing arranging for the packet to be

transmitted through a port without storing the packet identifier in a local transmit queue

if the number of transmit buffers does not exceed a pre- determined threshold

Katayama '653 discloses arranging for the packet to be transmit through a port

(figure 3, classified the packet in priority classes queues and transmit the packet

through the transmission interface 121, 122, 123, 124);

without storing the packet identifier (priorities A and B) in a local transmit queue if the

number of transmit buffers does not exceed a pre- determined threshold (Paragraph

[0044] stores received priority C data into the buffer 1, without being storing the data

priorities A and B in the buffer 1 when the amount of current use of the buffer 1 does not

exceed a threshold value.

Thus, it would have been obvious to one of ordinary skill in the art at the time of

the invention to modify the system of Minick '593 with the teaching of Katayama '653,

since Katayama '653 recited the motivation in the paragraph [0015] which increase in

received having low priority adversely affects transfer quality of received data having

higher priority.

30.   Regarding claim 28, Minick '593 discloses the limitations of claim 25 above.

However, Minick '593 are silent to disclosing storing the packet in the number of

transmit buffers

Katayama '653 discloses storing the packet in the number of transmit buffers

(figure 5, small buffers 150).

Thus, it would have been obvious to one of ordinary skill in the art at the time of

the invention to modify the system of Minick '593 with the teaching of Katayama '653,

since Katayama '653 recited the motivation in the paragraph [0015] which increase in

received having low priority adversely affects transfer quality of received data having

higher priority.

31.   Claims 2, 11, 14, 4- 6, 12, 15 are rejected under 35 U.S.C. 103(a) as being

unpatentable over the combined system (Minick '593 – Katayama '653) in view of Shirai

et al. (US Patent No. 5,734,654 03/31/1998).

Regarding to claim 2, the combined system (Minick '593 – Katayama

'653)discloses the limitations of claim 1 above; however, the combined system (Minick

'593 – Katayama '653) are silent to disclosing to store packet IP in local transmit queue

for that port if the number of transmit buffer exceeds the pre-determined threshold.

Shirai et al. disclose to arrange packet identifier to be stored in local transmit

queue for that port if the number of transmit buffer exceeds the pre-determined

threshold (figure 18 shows if congestion is detected then packet is stored in common

buffer means local memory, congestion is detected based on available resources such

as port, transmitting buffer etc, buffer exceeds a predetermined references value, col. 2,

lines 27-32).

It would have been obvious to one of ordinary skill in the art at the time of the

invention was made to add technique from Shirai to the combined system (Minick '593 –

Katayama '653)in order to store packet ID in local transmit queue, thereby preventing

packets to being discarded (5,734,654, col. 3, lines 55-67).

32.   Regarding to claim 11, claim 11 is rejected the same reasons of claim 2 above.

33.   Regarding to claim 14, claim 14 is rejected the same reasons of claim 2 above.

34.   Regarding to claims 4 - 6, 12, 15, the combined system (Minick '593 – Katayama '653) disclose the limitations of claim 1 above; however, the combined system (Minick '593 – Katayama '653) are silent to disclosing arranging for the packet to be transmitted through a port without storing the packet identifier in a local transmit queue if the number of transmit buffers does not exceed a pre-determined threshold.

Shirai et al. disclose arranged for the packet to be transmitted through without storing the packet identifier in a local transmit queue if the transmit buffers does not exceed a pre-determined threshold (figure 18 shows that if congestion is detected then packet is stored in common buffer means local memory, congestion is detected based on available resources such as port, transmitting buffer etc., buffer exceeds a predetermined references value, local queue is empty or not, column 2, lines 27-32.

I would have been obvious to one of ordinary skill in the art at the time of the invention was made to add technique from Shirai to the combined system (Minick '593 – Katayama '653) to transmit packets without storing in local queue to speed up packets processing.

35.   Regarding to claim 5, Kuo discloses evaluation is based on a flow-control condition of that port (page 2, paragraph [0019].

36.   Regarding to claim 6, claim 6 is rejected the same reasons of claim 4 above.

37.   Regarding to claim 12, claim 12 is rejected the same reasons of claim 4 above.

38.   Regarding to claim 15, claim 15 is rejected the same reasons of claim 4 above.

39.   Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over the

combined system (Minick '593 – Katayama '653 – Shirai) in view of Karisoon (Pub. No. :

US 2002/0146014).

Regarding to claim 3, the combined system (Minick '593 – Katayama '653 –

Shirai) discloses that covers substantially all limitation of parent as claim above;

however, the combined system (Minick '593 – Katayama '653 – Shirai) does not teach

to store packet in external memory when local transmit queue for that port is full.

Karisoon teaches technique to store packet in external memory when local

transmit queue for that port is full (page 9, paragraph [0016].

It would have been obvious to one of ordinary skill in the art at the time of the

invention was made to add technique from Karisoon into the combined system (Minick

'593 – Katayama '653 – Shirai) to prevent packets from discarded.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to CHUONG T. HO whose telephone number is (571)272-

3133. The examiner can normally be reached on 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, EDAN ORGAD can be reached on (571) 272-7884. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

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CH
05/11/08

/Edan Orgad/

Supervisory Patent Examiner, Art Unit 2419